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RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/008,524
Source: OIPZ
Date Processed by STIC: 7-3-02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Corrected Diskette Needed

See page 7



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/008,524

DATE: 07/03/2002

TIME: 09:41:31

Input Set : A:\Cms0173.txt

Output Set: N:\CRF3\07032002\J008524.raw

```

3 <110> APPLICANT: Doorbar, John
5 <120> TITLE OF INVENTION: IMPROVEMENTS IN OR RELATING TO SCREENING FOR PAPILLOMA
6   VIRUSES
8 <130> FILE REFERENCE: 18396/1074
10 <140> CURRENT APPLICATION NUMBER: 10/008,524
C--> 11 <141> CURRENT FILING DATE: 2002-06-17
13 <150> PRIOR APPLICATION NUMBER: 09/314,268
14 <151> PRIOR FILING DATE: 1999-05-18
16 <160> NUMBER OF SEQ ID NOS: 179
18 <170> SOFTWARE: PatentIn Ver. 2.1
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 375
22 <212> TYPE: DNA
23 <213> ORGANISM: Human papillomavirus type 16
25 <400> SEQUENCE: 1
26 ggcgtgccac tctcagaagt tattgtcaaa aacttgcaac ttgctttggc aaatagctct 60
27 cgaaatgctg tcgtcttttc tgccagccct caactgaaag aggcccgatc agagaaggaa 120
28 gaagcccaa agccacttca caaagtagtg gtatgtgta gtaaaaaact cagtaagaag 180
29 cagagtgaac taaatgggat cgcagcctct ctaggagcag attacaggtg gagttttgat 240
30 gaaacagtga ctcatctcat ctatcaaggg cggccaaatg acactaatcg ggagtataaa 300
31 tctgtaaaag aaagaggagt acacattgtt tccgagcact ggctttttaga ttgtgcccaa 360
32 gagtgtaaac atctt                                     375
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 125
37 <212> TYPE: PRT
38 <213> ORGANISM: Homo sapiens
40 <400> SEQUENCE: 2
41 Ala Leu Pro Leu Ser Glu Val Ile Val Lys Asn Leu Gln Leu Ala Leu
42 1 5 10 15
44 Ala Asn Ser Ser Arg Asn Ala Val Ala Leu Ser Ala Ser Pro Gln Leu
45 20 25 30
47 Lys Glu Ala Gln Ser Glu Lys Glu Glu Ala Pro Lys Pro Leu His Lys
48 35 40 45
50 Val Val Val Cys Val Ser Lys Lys Leu Ser Lys Lys Gln Ser Glu Leu
51 50 55 60
53 Asn Gly Ile Ala Ala Ser Leu Gly Ala Asp Tyr Arg Trp Ser Phe Asp
54 65 70 75 80

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Input Set : A:\Cms0173.txt

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```

66 <210> SEQ ID NO: 3
67 <211> LENGTH: 491
68 <212> TYPE: PRT
69 <213> ORGANISM: Homo sapiens
71 <400> SEQUENCE: 3
72 Ala Pro Glu Glu His Asp Ser Pro Thr Glu Ala Ser Gln Pro Ile Val
73   1           5           10           15
75 Glu Glu Glu Glu Thr Lys Thr Phe Lys Asp Leu Gly Val Thr Asp Val
76           20           25           30
78 Leu Cys Glu Ala Cys Asp Gln Leu Gly Trp Thr Lys Pro Thr Lys Ile
79   35           40           45
81 Gln Ile Glu Ala Tyr Ser Leu Ala Leu Gln Gly Arg Asp Ile Ile Gly
82   50           55           60
84 Leu Ala Glu Thr Cys Ser Cys Lys Thr Gly Ala Phe Ala Leu Pro Ile
85  65           70           75           80
87 Leu Asn Ala Leu Leu Glu Thr Pro Gln Arg Leu Phe Ala Leu Val Leu
88           85           90           95
90 Thr Pro Thr Arg Ser Trp Pro Phe Arg Ser Gln Ser Ser Leu Lys Pro
91           100          105          110
93 Trp Ser Ser Ile Gly Val Gln Ser Ala Val Ile Val Gly Gly Ile Asp
94   115          120          125
96 Ser Met Ser Gln Ser Leu Ala Leu Ala Lys Lys Pro His Ile Ile Ile
97   130          135          140
99 Ala Thr Pro Gly Arg Leu Ile Asp His Leu Glu Asn Thr Lys Gly Phe
100 145          150          155          160
102 Asn Leu Arg Ala Leu Lys Tyr Leu Val Met Asp Glu Ala Asp Arg Ile
103           165          170          175
105 Leu Asn Met Asp Phe Glu Thr Glu Val Asp Lys Ile Leu Lys Val Ile
106           180          185          190
108 Pro Arg Asp Arg Lys Thr Phe Leu Phe Ser Ala Thr Met Thr Lys Lys
109           195          200          205
111 Val Gln Lys Leu Gln Arg Ala Ala Leu Lys Asn Pro Val Lys Cys Ala
112   210          215          220
114 Val Ser Ser Lys Tyr Gln Thr Val Glu Lys Leu Gln Gln Tyr Tyr Ile
115 225          230          235          240
117 Phe Ile Pro Ser Lys Phe Lys Asp Thr Tyr Leu Val Tyr Ile Leu Asn
118           245          250          255
120 Glu Leu Ala Gly Asn Ser Phe Met Ile Phe Cys Ser Thr Cys Asn Asn
121           260          265          270
123 Thr Gln Arg Thr Ala Leu Leu Leu Arg Asn Leu Gly Phe Thr Ala Ile
124           275          280          285
126 Pro Leu His Gly Gln Met Ser Lys Arg Leu Gly Ser Leu Asn Lys Phe
127           290          295          300
129 Lys Ala Lys Ala Arg Ser Ile Leu Leu Ala Thr Asp Val Ala Ser Arg
130 305          310          315          320
132 Gly Leu Asp Ile Pro His Val Asp Val Val Val Asn Phe Asp Ile Pro

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```

136 Gly Arg Ser Gly Lys Ala Ile Thr Phe Val Thr Gln Tyr Asp Val Glu
139           355           360           365
141 Leu Phe Gln Arg Ile Glu His Leu Ile Gly Lys Lys Leu Pro Gly Phe
142       370           375           380
144 Pro Thr Gln Asp Asp Glu Val Met Met Leu Thr Glu Arg Val Ala Glu
145 385           390           395           400
147 Ala Gln Arg Phe Ala Arg Met Glu Leu Arg Glu His Gly Glu Lys Lys
148           405           410           415
150 Lys Arg Ser Arg Glu Asp Ala Gly Asp Asn Asp Asp Thr Arg Gly Cys
151           420           425           430
153 Tyr Val Cys Gln Glu Gln Gly Gly Trp Arg Lys Asn Glu Glu Ala Glu
154       435           440           445
156 Arg Pro Leu Ile Thr Phe Met Lys Ala Arg Val Leu Leu Phe Cys Lys
157       450           455           460
159 Arg Glu Leu Glu Asn Glu Thr Cys Ser Asn Arg Asp His Glu Thr Glu
160 465           470           475           480
162 Ile Gly Gln Asn Cys Val Gln Asn Val Leu Ser
163           485           490

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166 <210> SEQ ID NO: 4

167 <211> LENGTH: 25

168 <212> TYPE: PRT

169 <213> ORGANISM: Human papillomavirus type 16

171 <400> SEQUENCE: 4

172 Arg Pro Ile Pro Lys Pro Ser Pro Trp Ala Pro Lys Lys His Arg Arg

173 1 5 10 15

175 Leu Ser Asp Gln Asp Ser Gln Thr Pro

176 20 25

179 <210> SEQ ID NO: 5

180 <211> LENGTH: 8

181 <212> TYPE: PRT

182 <213> ORGANISM: Artificial Sequence

184 <220> FEATURE:

185 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic

186 octapeptide antigen

188 <400> SEQUENCE: 5

189 Met Ala Asp Pro Ala Ala Thr

190 1 5

193 <210> SEQ ID NO: 6

194 <211> LENGTH: 8

195 <212> TYPE: PRT

196 <213> ORGANISM: Artificial Sequence

198 <220> FEATURE:

199 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic

200 octapeptide antigen

202 <400> SEQUENCE: 6

203 Ala Asp Pro Ala Ala Thr Lys

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```

209 <212> TYPE: PRT
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
214     octapeptide antigen
216 <400> SEQUENCE: 7
217 Asp Pro Ala Ala Ala Thr Lys Tyr
218     1           5
221 <210> SEQ ID NO: 8
222 <211> LENGTH: 8
223 <212> TYPE: PRT
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
228     octapeptide antigen
230 <400> SEQUENCE: 8
231 Pro Ala Ala Ala Thr Lys Tyr Pro
232     1           5
235 <210> SEQ ID NO: 9
236 <211> LENGTH: 8
237 <212> TYPE: PRT
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
242     octapeptide antigen
244 <400> SEQUENCE: 9
245 Ala Ala Ala Thr Lys Tyr Pro Leu
246     1           5
249 <210> SEQ ID NO: 10
250 <211> LENGTH: 8
251 <212> TYPE: PRT
252 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
256     octapeptide antigen
258 <400> SEQUENCE: 10
259 Ala Ala Thr Lys Tyr Pro Leu Leu
260     1           5
263 <210> SEQ ID NO: 11
264 <211> LENGTH: 8
265 <212> TYPE: PRT
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
270     octapeptide antigen
272 <400> SEQUENCE: 11

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RAW SEQUENCE LISTING

DATE: 07/03/2002

PATENT APPLICATION: US/10/008,524

TIME: 09:41:31

Input Set : A:\Cms0173.txt

Output Set: N:\CRF3\07032002\J008524.raw

278 <211> LENGTH: 8
279 <212> TYPE: PRT
280 <213> ORGANISM: Artificial Sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
284 octapeptide antigen
286 <400> SEQUENCE: 12
287 Thr Lys Tyr Pro Leu Leu Lys Leu
288 1 5
291 <210> SEQ ID NO: 13
292 <211> LENGTH: 8
293 <212> TYPE: PRT
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
298 octapeptide antigen
300 <400> SEQUENCE: 13
301 Lys Tyr Pro Leu Leu Lys Leu Leu
302 1 5
305 <210> SEQ ID NO: 14
306 <211> LENGTH: 8
307 <212> TYPE: PRT
308 <213> ORGANISM: Artificial Sequence
310 <220> FEATURE:
311 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
312 octapeptide antigen
314 <400> SEQUENCE: 14
315 Tyr Pro Leu Leu Lys Leu Leu Gly
316 1 5
319 <210> SEQ ID NO: 15
320 <211> LENGTH: 8
321 <212> TYPE: PRT
322 <213> ORGANISM: Artificial Sequence
324 <220> FEATURE:
325 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
326 octapeptide antigen
328 <400> SEQUENCE: 15
329 Pro Leu Leu Lys Leu Leu Gly Ser
330 1 5
333 <210> SEQ ID NO: 16
334 <211> LENGTH: 8
335 <212> TYPE: PRT
336 <213> ORGANISM: Artificial Sequence
338 <220> FEATURE:
339 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
340 octapeptide antigen

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/008,524

DATE: 07/03/2002
TIME: 09:41:32

Input Set : A:\Cms0173.txt
Output Set: N:\CRF3\07032002\J008524.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:174; N Pos. 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42
Seq#:174; N Pos. 43,44,45,46,47,48,49
Seq#:177; N Pos. 41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59
Seq#:177; N Pos. 60,61,62,63,64,65,66
Seq#:178; N Pos. 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42
Seq#:178; N Pos. 43,44,45,46,47,48,49

VARIABLE LOCATION SUMMARY

PATENT APPLICATION: US/10/008,524

DATE: 07/03/2002

TIME: 09:41:32

Input Set : A:\Cms0173.txt

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Use of n's or Xaa's(NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

✓ Seq#:174; N Pos. 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42

Seq#:174; N Pos. 43,44,45,46,47,48,49

✓ Seq#:177; N Pos. 41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59

Seq#:177; N Pos. 60,61,62,63,64,65,66

Seq#:178; N Pos. 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42

Seq#:178; N Pos. 43,44,45,46,47,48,49

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/008,524

DATE: 07/03/2002

TIME: 09:41:32

Input Set : A:\Cms0173.txt

Output Set: N:\CRF3\07032002\J008524.raw

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:2900 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:174
L:2900 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:174
L:2900 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:174 after pos.:0
L:2940 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:177
L:2940 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:177
L:2940 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:177 after pos.:0
L:2941 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:177
L:2941 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:177
L:2941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:177 after pos.:60
L:2954 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:178
L:2954 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:178
L:2954 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:178 after pos.:0